29,157,603

Gp 2904 #24/03 6

F A X

From: J. Kenneth Sanders, Sanders Marketing, Inc.
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Number of pages in this transmittal: __2__

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Date: 3/7/03
To: USPTO attn: Cynthia Streeter
From: J. Kenneth Sanders Re: Patent application 29/157,603
Quiet Vertical Take Off & Landing (VTOL) Aircraft
Fax: (703) 308-5806
Classification: Priority - Please deliver immediately

Hello Ms. Streeter: Thank you very much for your two phone calls to clarify the situation on our patent application for the UFOZ VTOL.

As you suggested, I am sending this to formally request that the last submission my son and I sent in, dated February 4, 2003, be considered the 'correct' version without mistakes, and just <u>part of our original application</u> for the UFOZ VTOL.

To clarify the situation, the 20-page version that we sent in on January 22, 2003, had a few small but important improvements over the application that we sent on December 31, 2000 and was accepted by you folks as of January 7, 2001 as # 29/157,603.

We thought that inasmuch as we hadn't heard anything yet from the USPTO that we could just make the slightly improved version the one that you reviewed and give us the patent for. I'm sorry to say that the new 20-page version didn't have the pages numbered, left out an important improvement, and at the beginning page it said The Idea Creatique, Inc., but on following pages it said UFOZ, Inc., for which the incorporation is not yet complete.

Therefore, the Feb. 4, 2003 is the most recent and definitely the correct version, and definitely meant to be all part of the same 29/157,603 application.

However, if the USPTO has to give us the new date of Jan. 7 or Jan. 22, 2003, I guess that's OK as long as nobody has tried to copy our idea during that year. We have had to show it to quite a few people to be able to obtain a Technical Assessment and to begin to raise funding for a prototype. Although they have signed Non-Disclosure Agreements, they may have been dishonest enough to

make a few changes and submit their own patent...in which case we'd want to keep our original 1/7/01 date.

There is another important consideration. If the 18-month clock started on 1/7/01 and we only have until July 2003 to protect our invention internationally, that would be terrible. If the 18-month deadline for registering our patent in foreign countries doesn't begin until you folks tell us it begins, then we're OK. It will take us many months to raise the money for the attorneys and then for them to do all that legal work. We couldn't possibly do all that before July and therefore it would be better to have a 1/7/02 origination date instead of a 1/7/01 origination date.

We are finally going to be receiving the great Technical Assessment in a few days and will be sending you a Request For Privacy along with the TA. The first prototype we'll build will be for the military and all the first production models will go to the military branches, so National Security should be protected.

Thank you very much for you kind assistance in these important matters.

Aloha,
J. Kenneth Sanders
Chairman, CEO
Sanders Marketing, Inc., and The Idea Creatique, Inc.

02-06-03 290046

PTO/SB/21 (01-03)
Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)		
	Application Number	29/157,603
	Filing Date	01/07/2002
	First Named Inventor	John K. Sanders, Jr.
	Art Unit	2900
	Examiner Name	K. Samson
Total Number of Pages in This Submission: 25	Attorney Docket Number	

ENCLOSURES (*Check all that apply*)

- [x] Fee Transmittal Form
  - [x] Fee Attached
- [x] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [x] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) ____________
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- [x] Proprietary Information
- [ ] Status Letter
- [x] Other Enclosure(s) (please Identify below):

Remarks

We apologize for submitting last week a 20-page Patent application that should have been this 21-page document. It is our $165. mistake (check enclosed for re-submission) this time including the details we omitted previously.
We would appreciate it very much if you would substitute this one for that one, and taking note of the $327. of fees paid at that time, 1/22/03, on this same # 29/157,603. Thanks!

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	J. Kenneth Sanders
Signature	J. Kenneth Sanders
Date	2/4/03

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: ____________

Typed or printed	J. Kenneth Sanders		
Signature	J. Kenneth Sanders	Date	2/4/03

Sanders , et al. Febuary ??, 2003

Quiet Vertical Take Off & Landing (VTOL) Aircraft

Inventors:	**Sanders; John K.** (CM, CA), **Sanders; J. Kenneth** (Hono, HI)
Assignee:	**The Idea Creatique** (Hono, HI)
Appl. No.:	??????
Filed: Jan.	????
Current U.S. Class:	244/12.1; 244/12.2; 244/12.3; 244/ 23A; 244/23B; 244/45A; 244/91
Intern'l Class:	B64C 029/00-04
Field of Search:	244/12.13,225,122,17.19,12.2, 23 C,12.1,36,23 A,23 R

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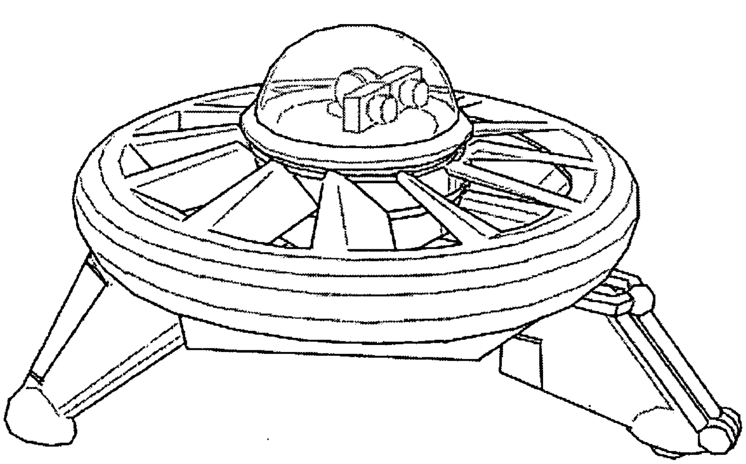

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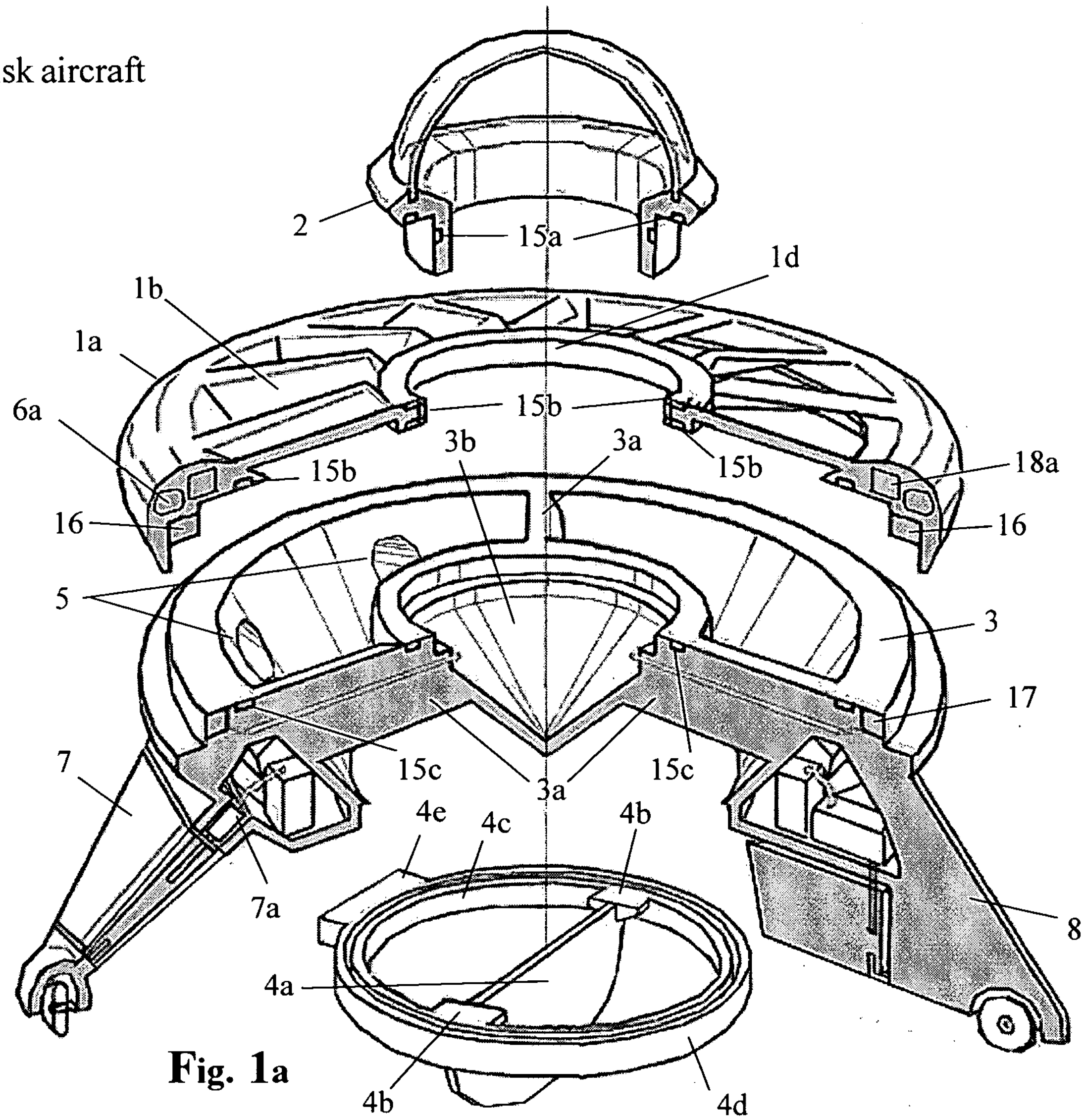
Abstract

Unusual Flying Object (UFO) with Vertical Take Off and Landing (VTOL) capabilities including forward flight with a quiet electric, battery powered, Linear Induction Magnetic Bearings (LIMB) power drive used for, manned or un-manned, small cargo transport, recreational vehicle or aerial surveillance; aerial reconnaissance, coastal surveillance, law enforcement, traffic management, estate or park patrol, geographical or geological survey, border or pipeline patrol, communications relay platform, search and rescue, media coverage support. The invention is capable of modifications in various respects, all without departing from the invention. Accordingly, the drawings and the description are to be regarded as illustrative in nature, and not as restrictive.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1b
1a
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15c
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4e
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7a
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4d

Fig. 1a

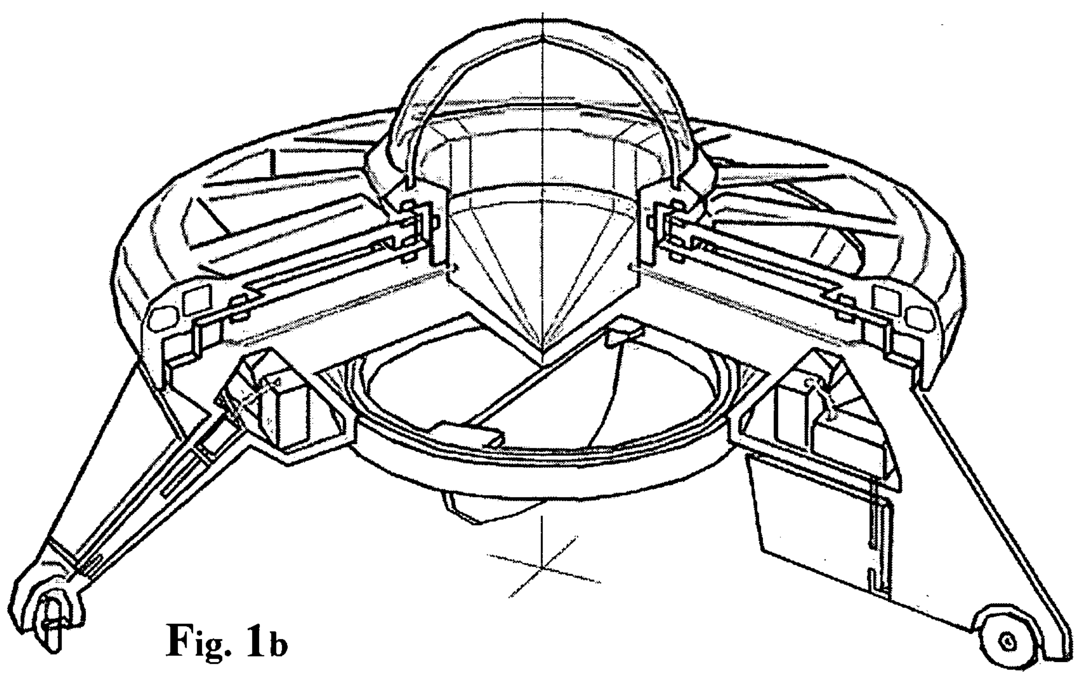

Fig. 1b

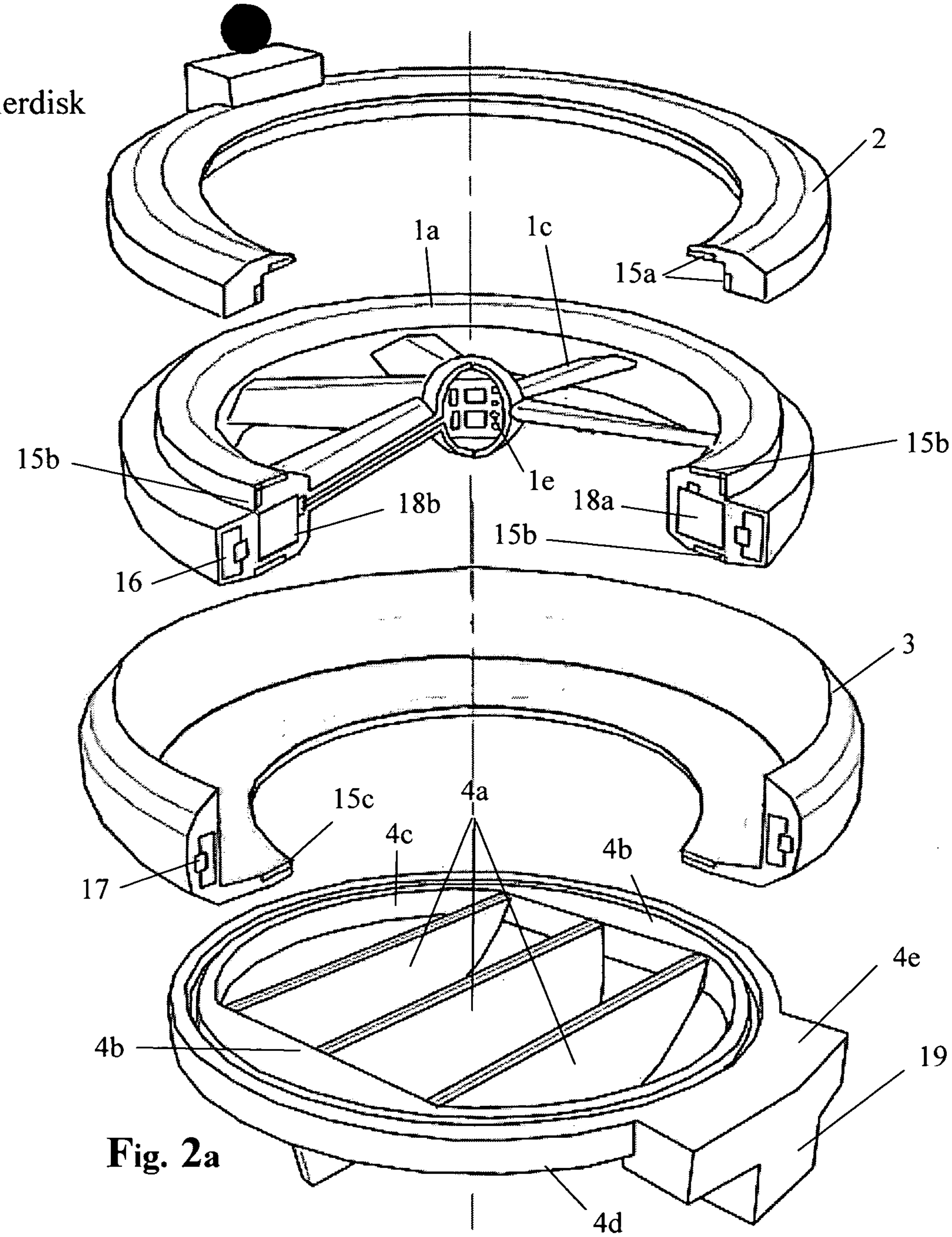

Fig. 2a

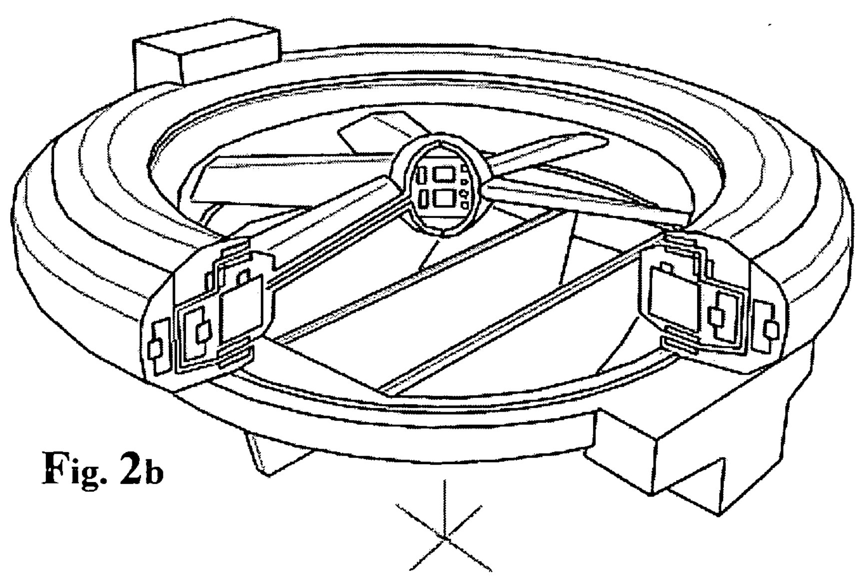

Fig. 2b

shrouded impellerdisk
(with liquid fuel jets)

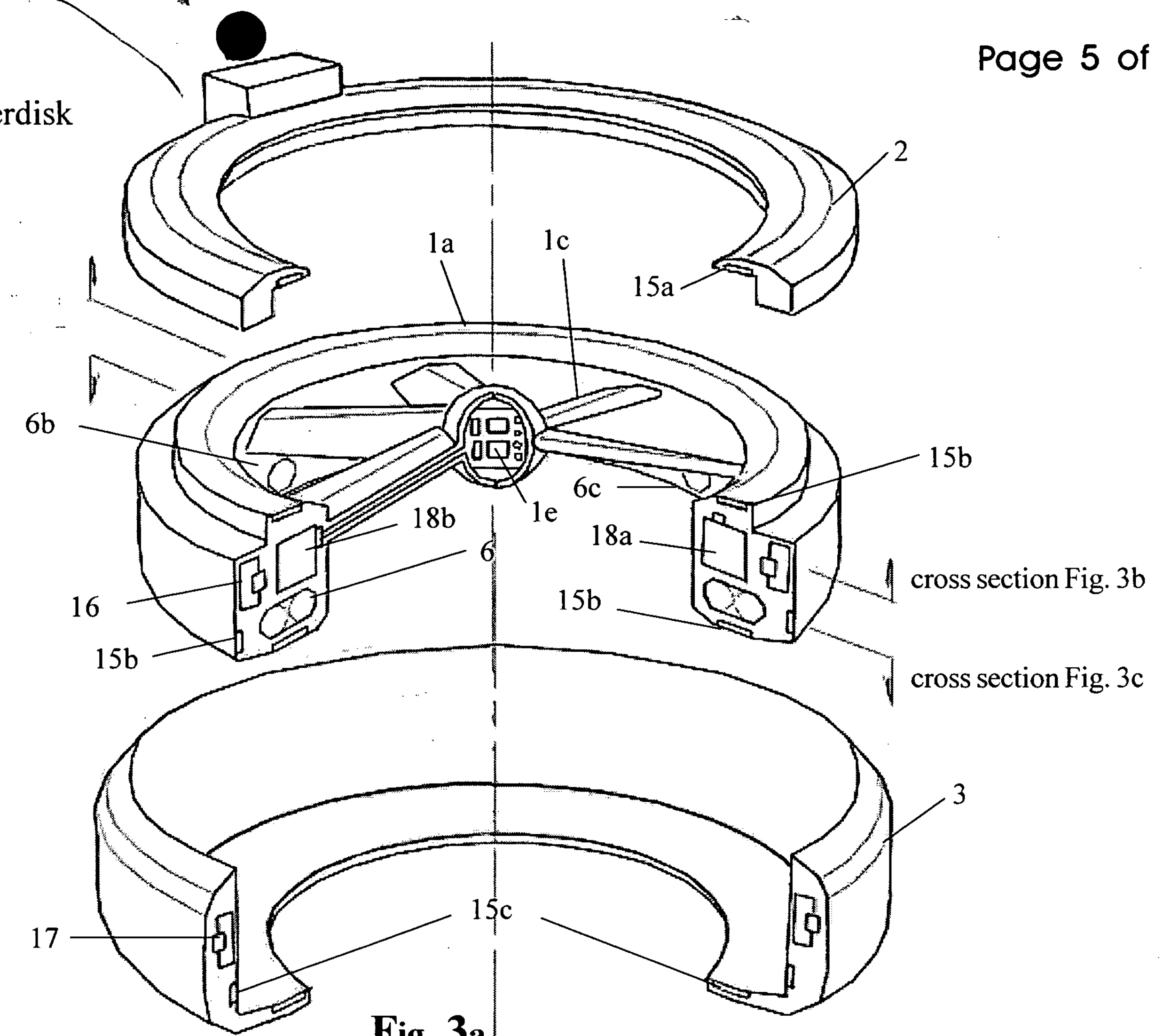

Fig. 3a

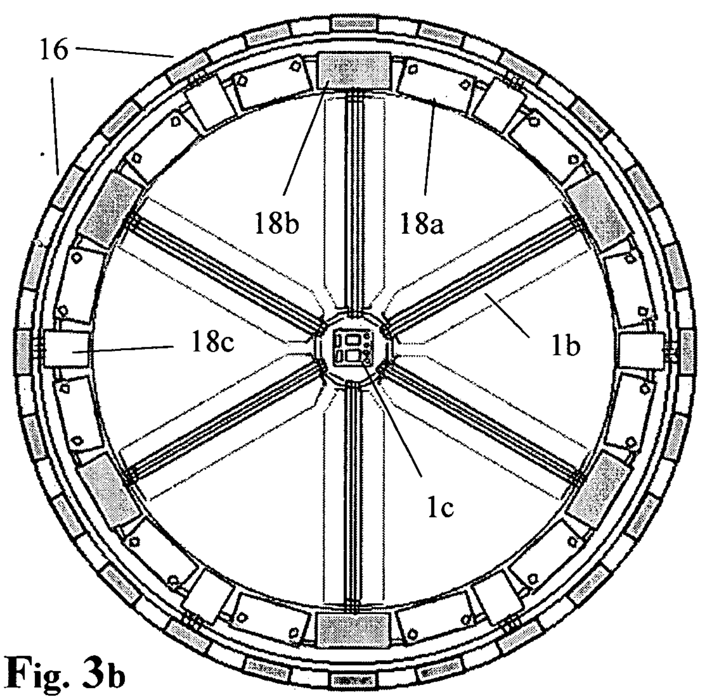

Fig. 3b

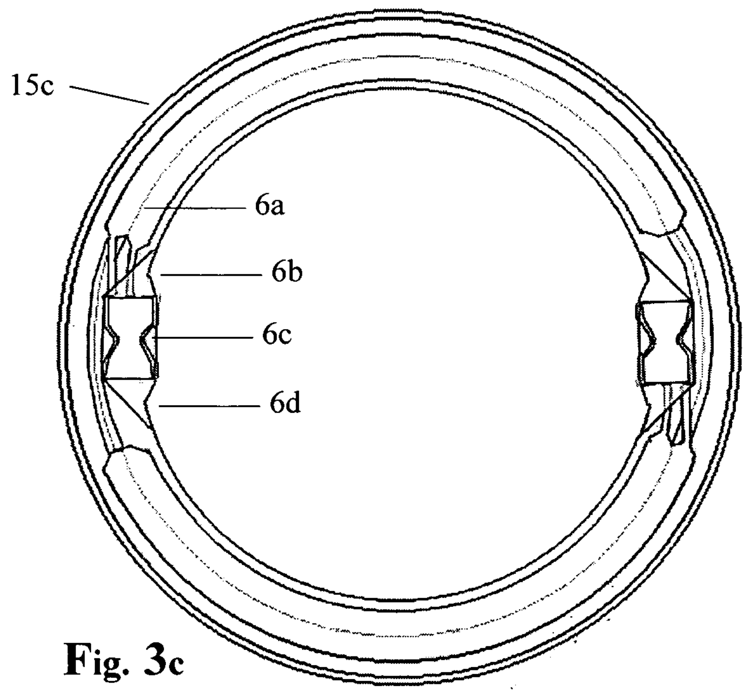

Fig. 3c

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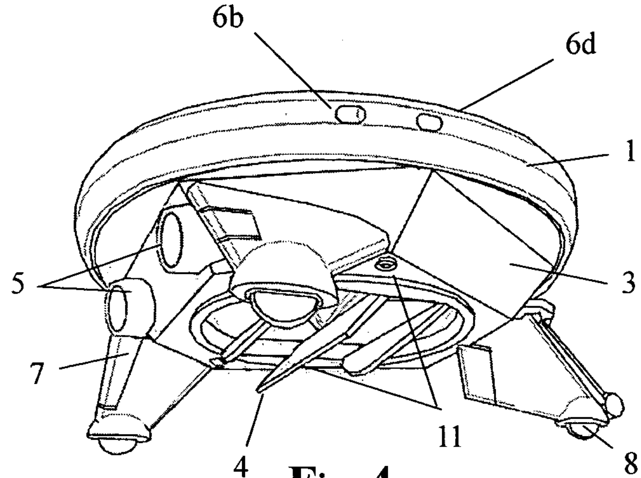

Fig. 4a

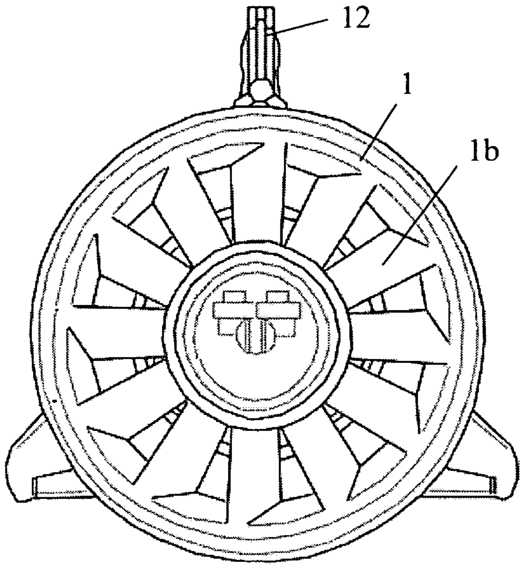

Fig. 4b

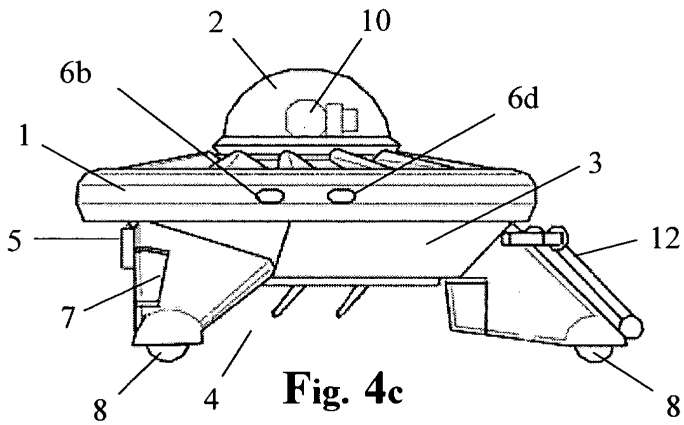

Fig. 4c

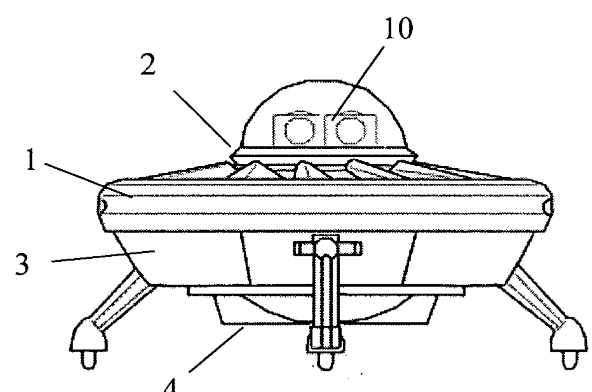

Fig. 4d

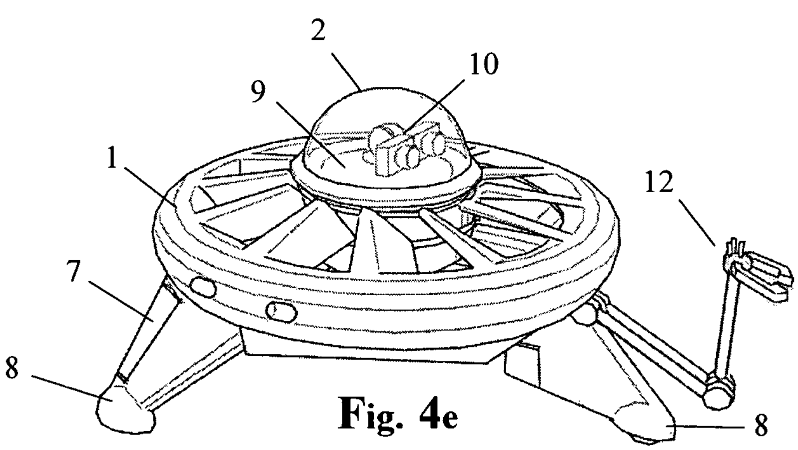

Fig. 4e

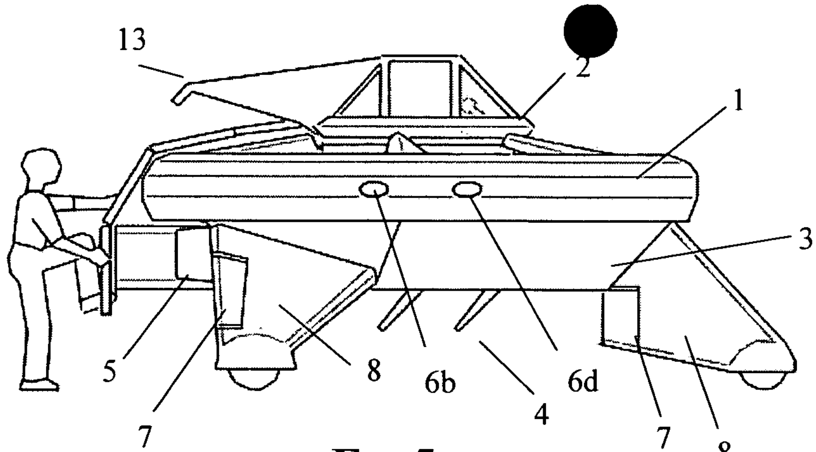

Fig. 5a

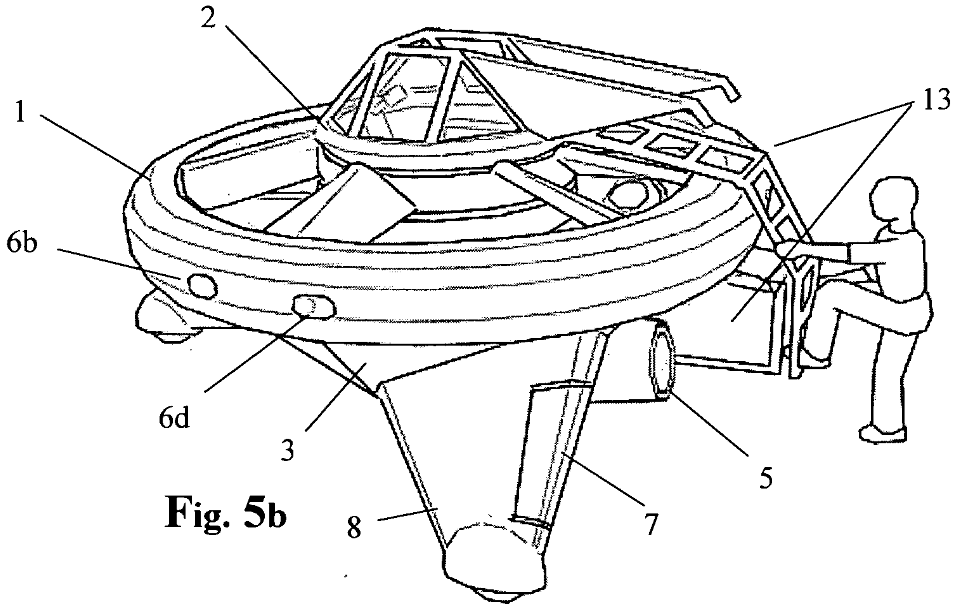

Fig. 5b

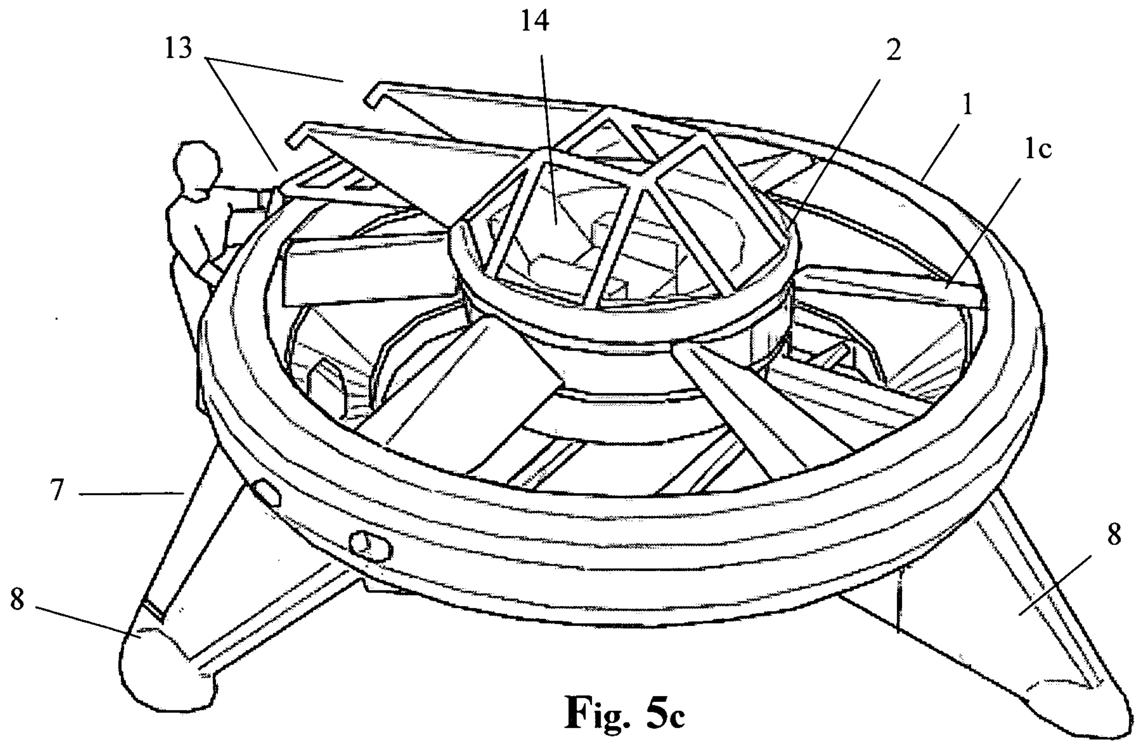

Fig. 5c

UFOz

huverbot with 2 vertically stacked shrouded impellerdisks

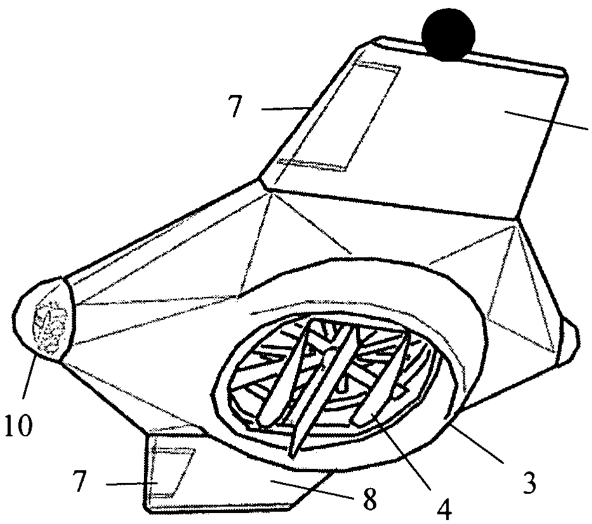

Fig. 6a

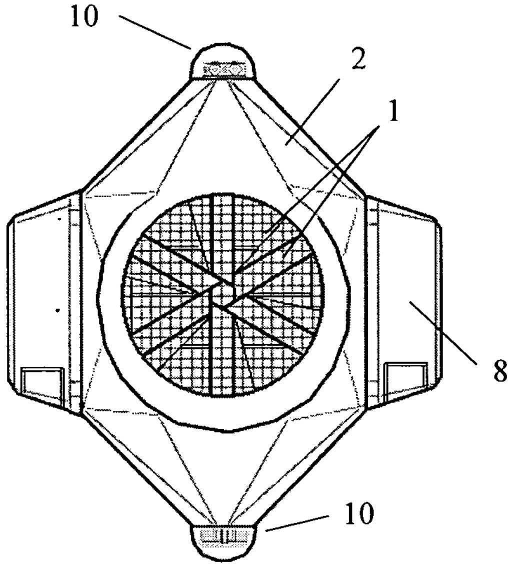

Fig. 6b

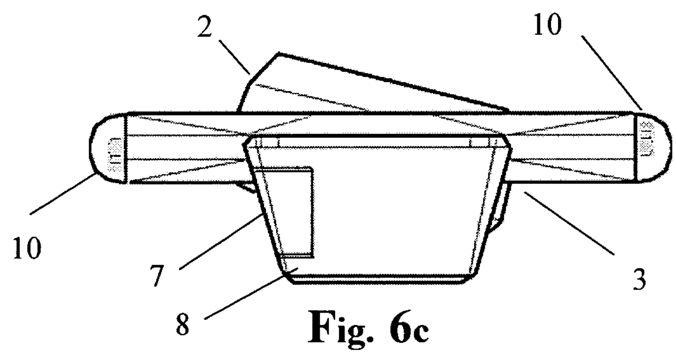

Fig. 6c

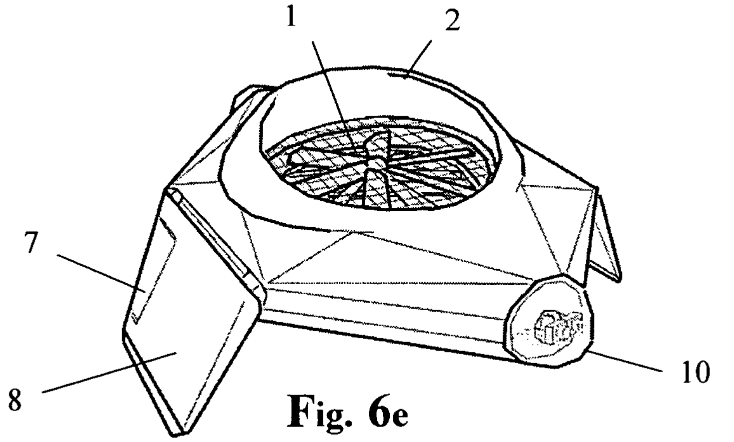

Fig. 6e

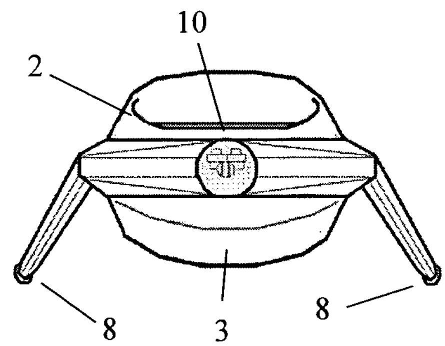

Fig. 6d

2-2003

UFOz

hoverbot with 2 horizontally spaced shrouded impellerdisks

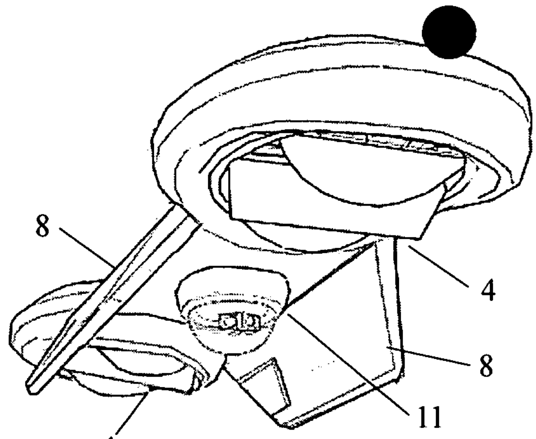

Fig. 7a

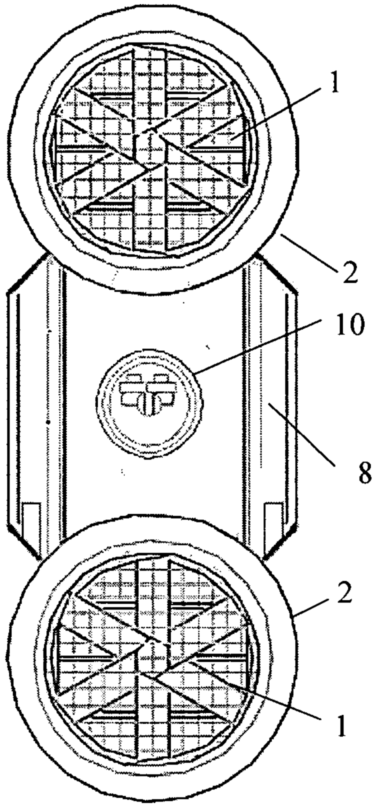

Fig. 7b

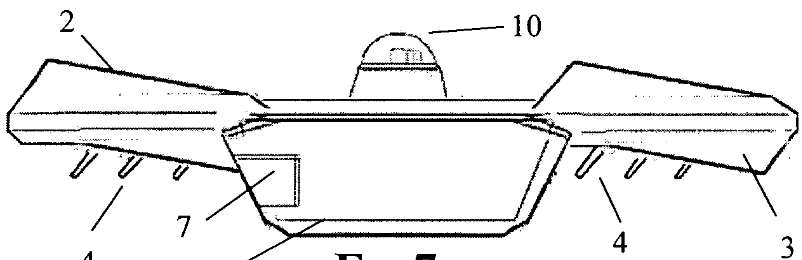

Fig. 7c

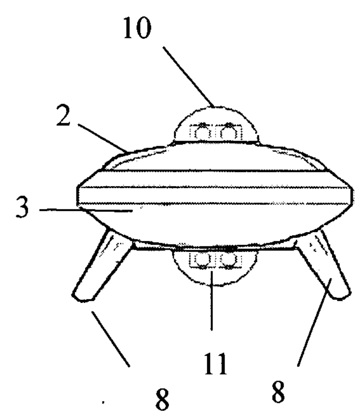

Fig. 7d

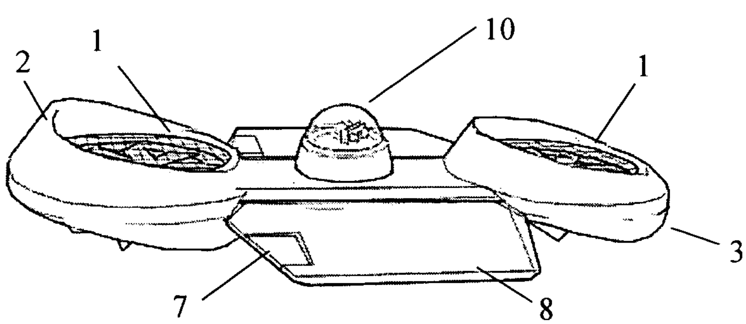

Fig. 7e

hoverboard with 2 shrouded
impellerdisks

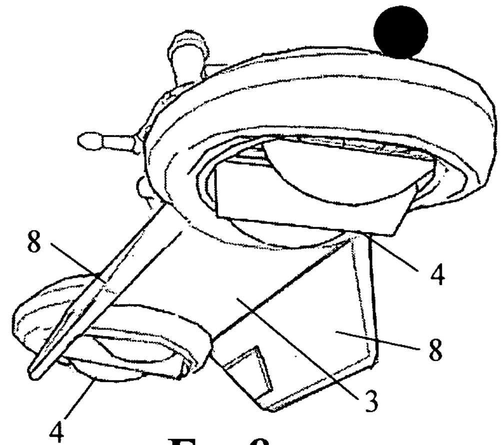

Fig. 8a

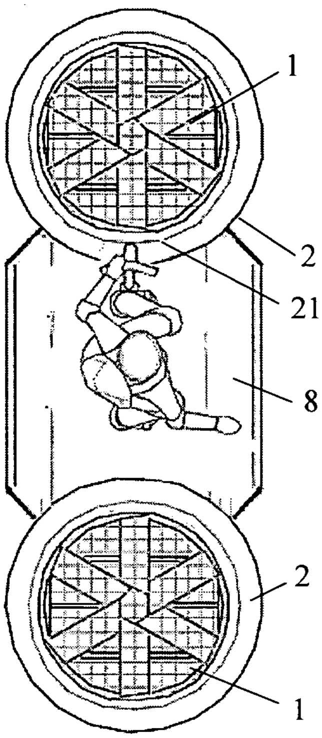

Fig. 8b

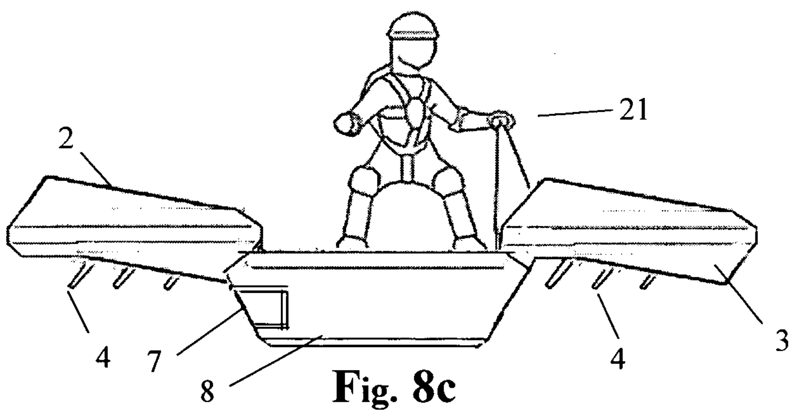

Fig. 8c

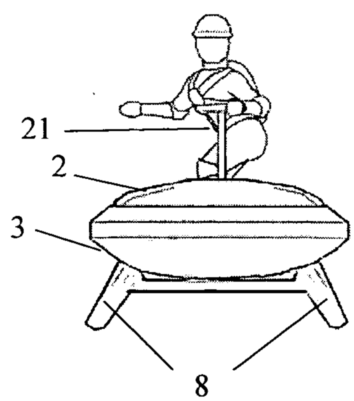

Fig. 8d

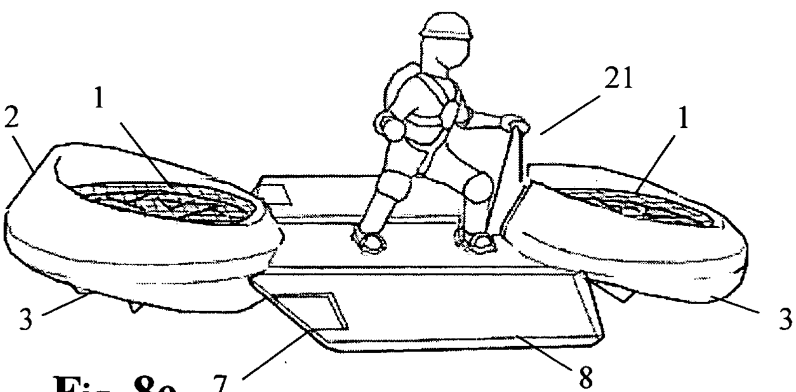

Fig. 8e

hoverbike with 2 shrouded impellerdisks

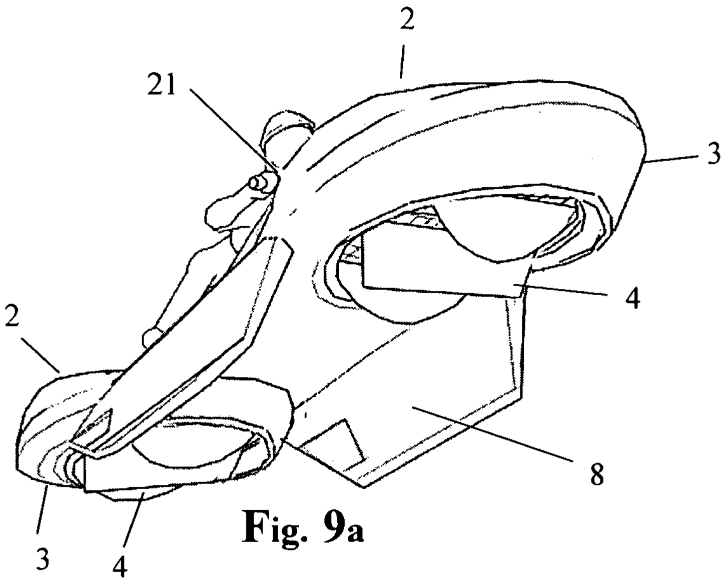

Fig. 9a

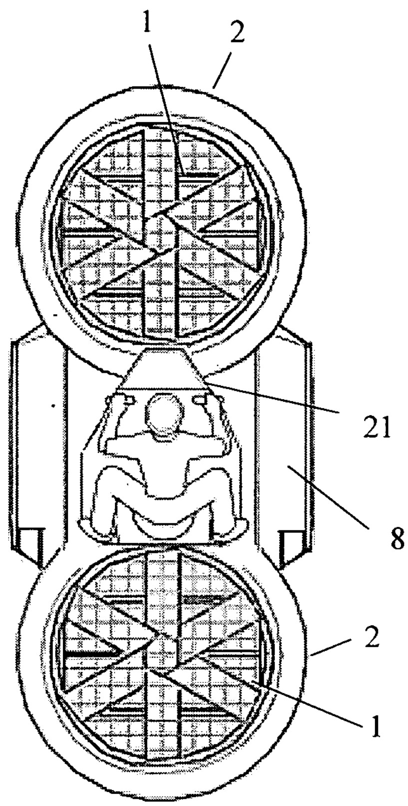

Fig. 9b

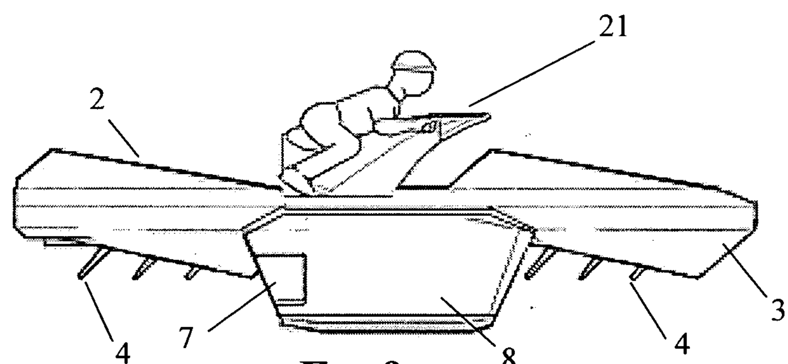

Fig. 9c

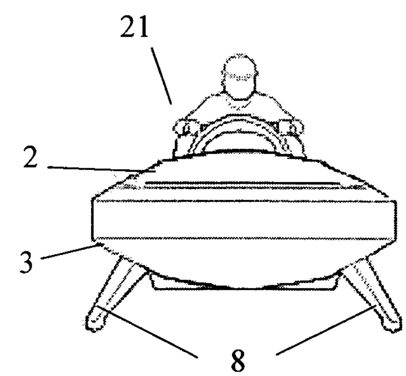

Fig. 9d

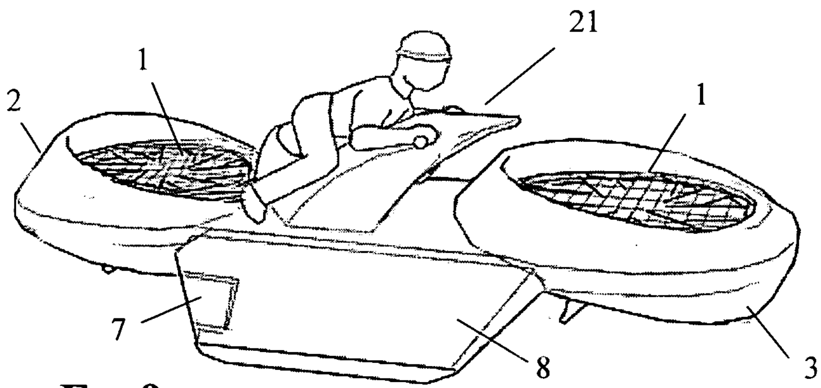

Fig. 9e

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UFOz

hoverpod with 2 shrouded impellerdisks

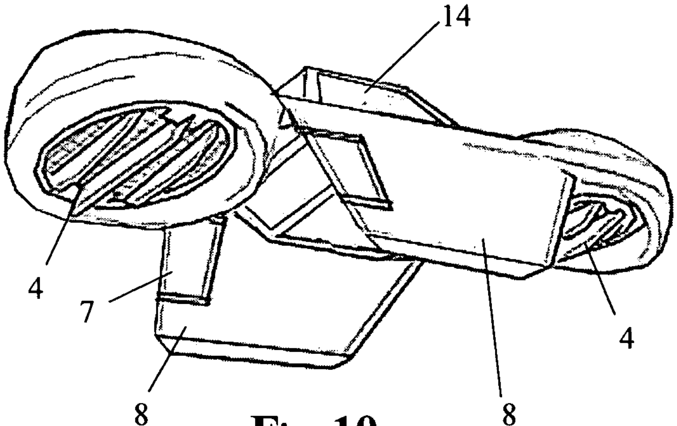

Fig. 10a

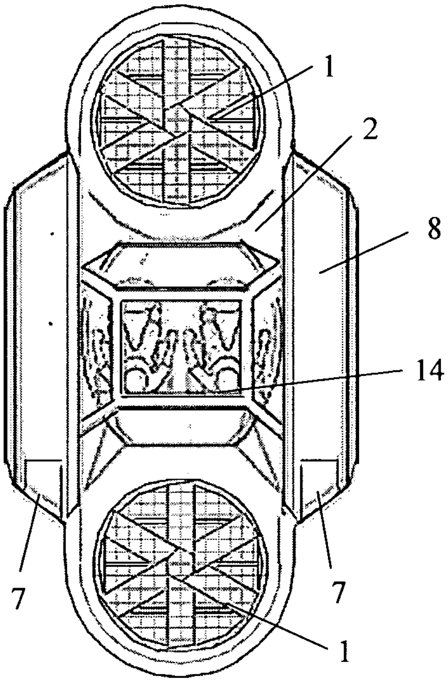

Fig. 10b

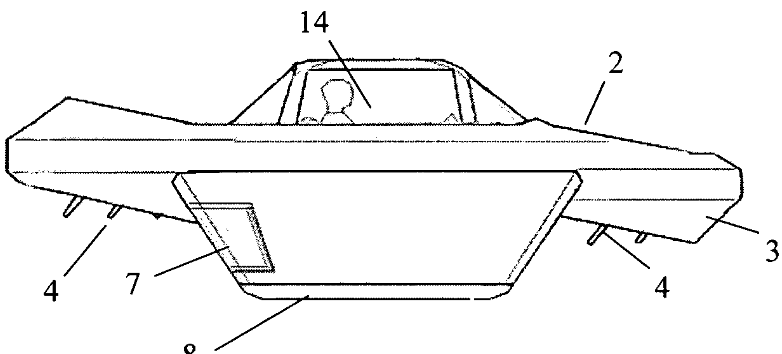

Fig. 10c

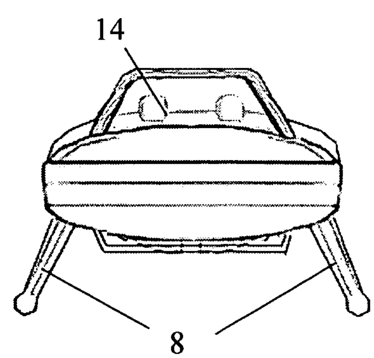

Fig. 10d

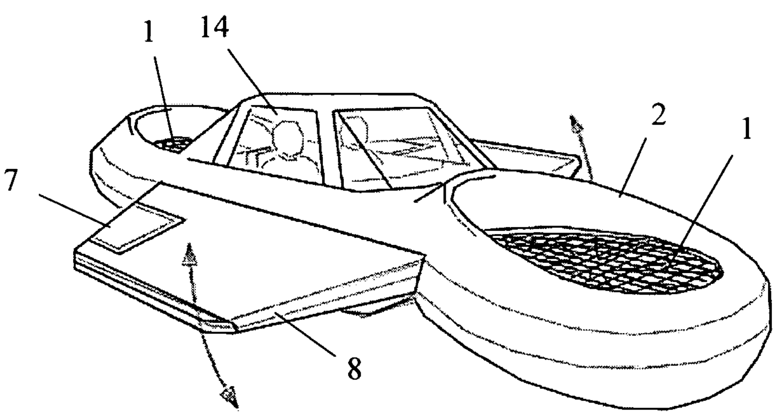

Fig. 10e

UFOz

aircraft with 3 shrouded impellerdisks

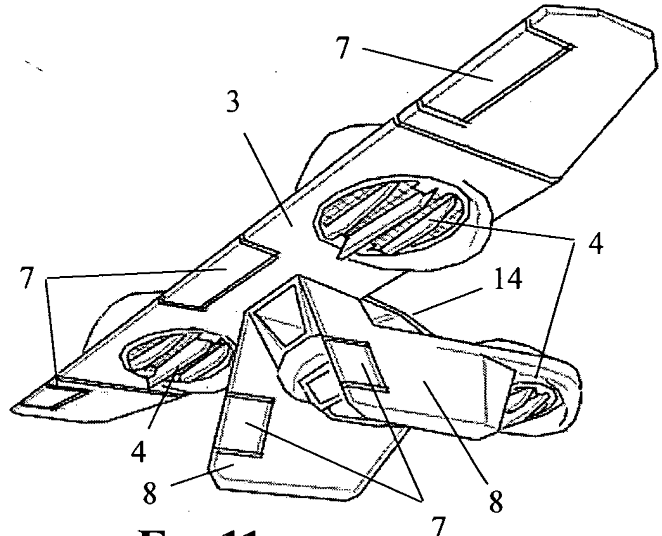

Fig. 11a

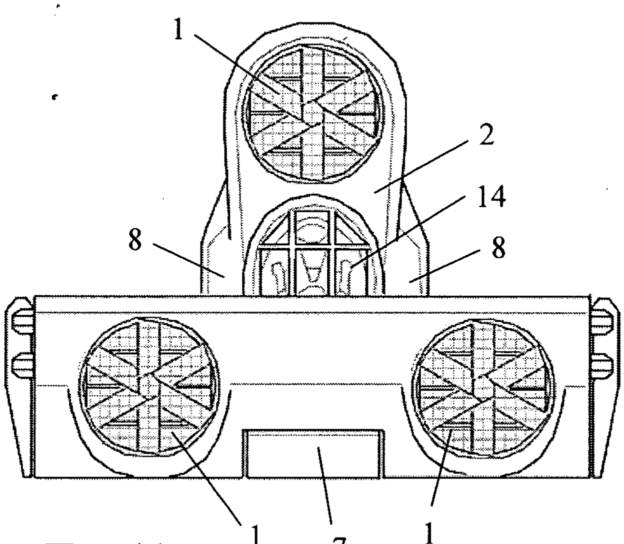

Fig. 11b

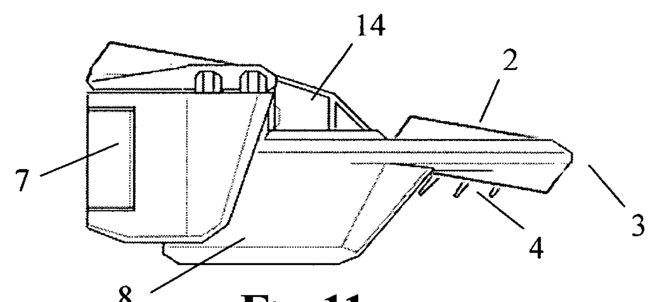

Fig. 11c

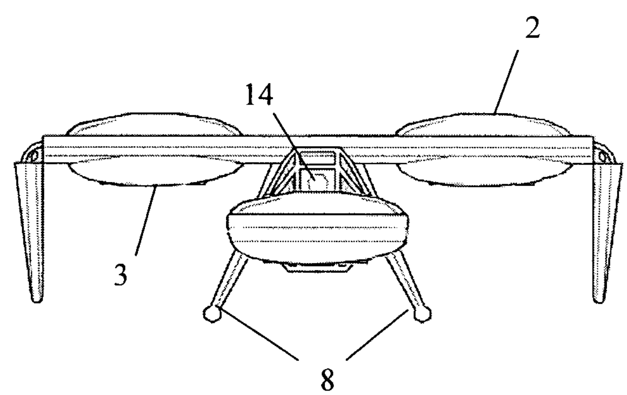

Fig. 11d

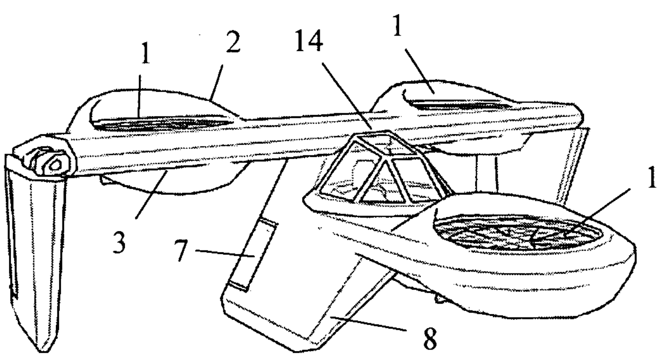

Fig. 11e

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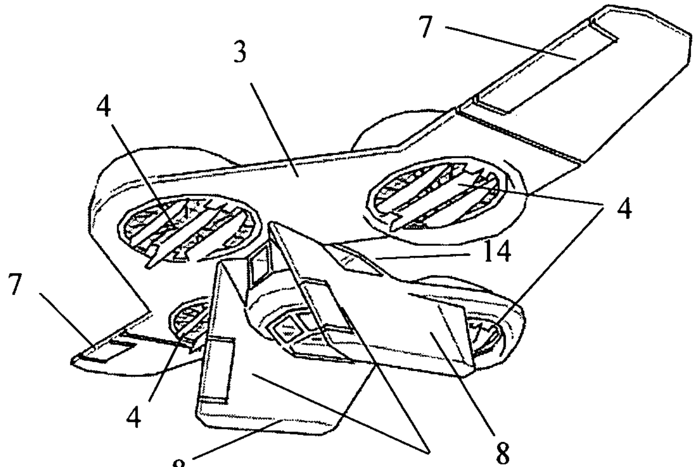

Fig. 12a

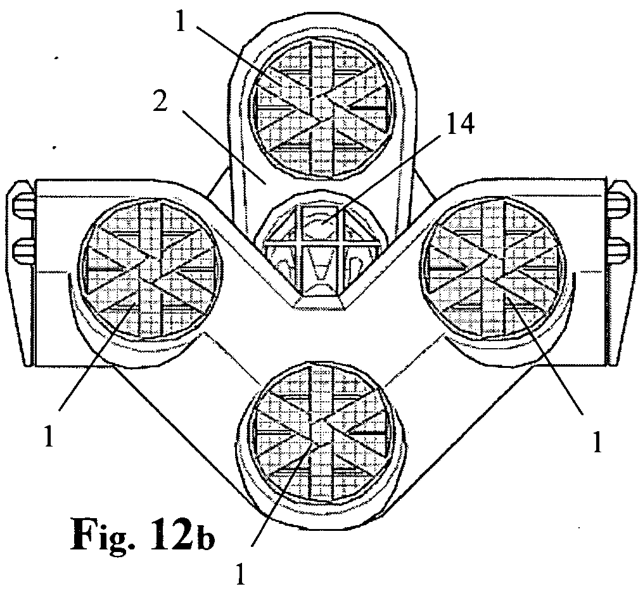

Fig. 12b

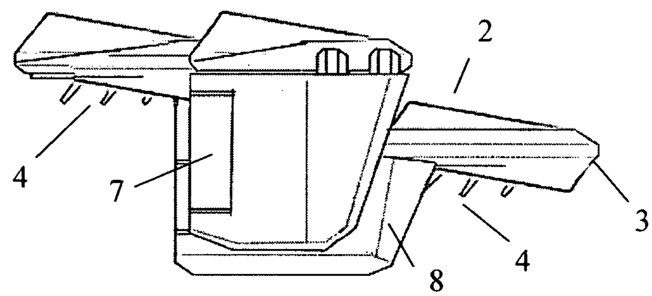

Fig. 12c

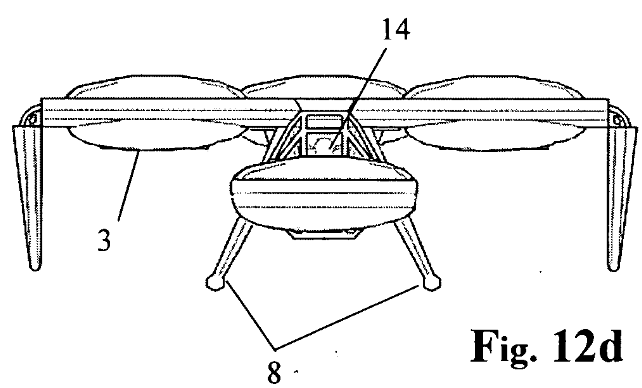

Fig. 12d

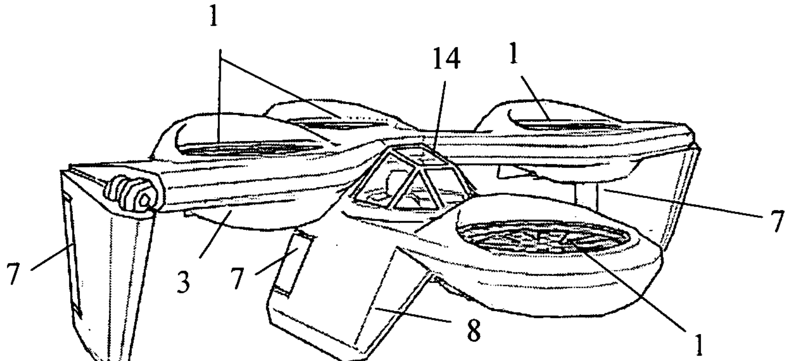

Fig. 12e

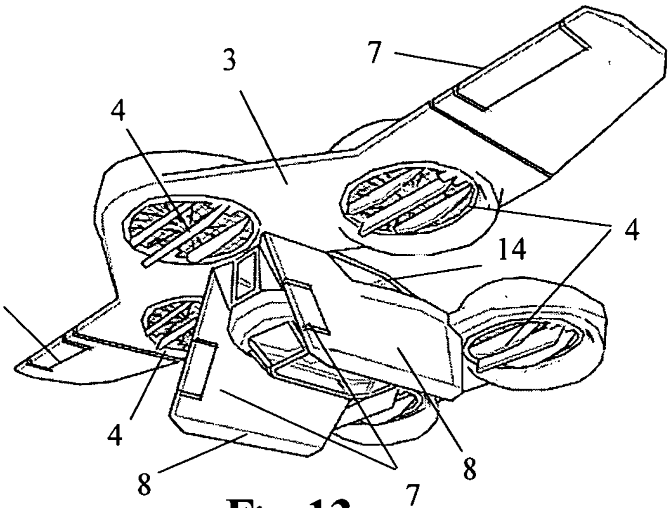

Fig. 13a

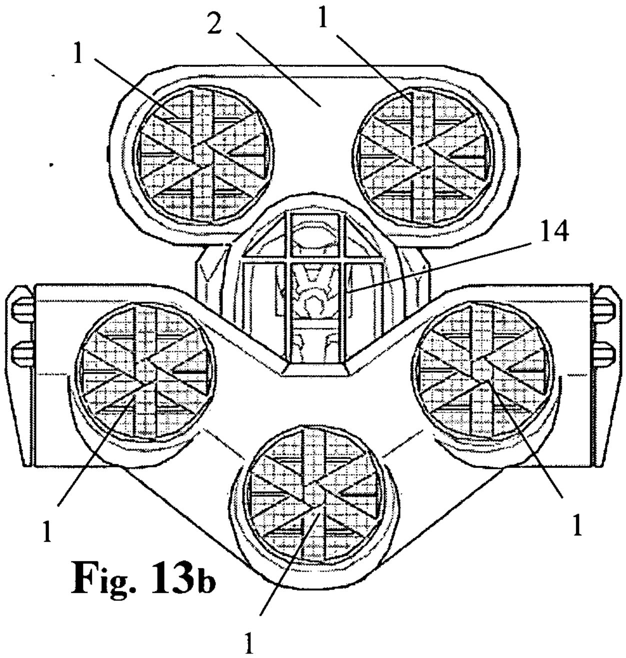

Fig. 13b

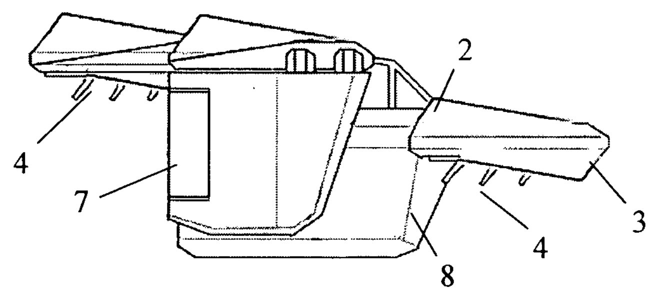

Fig. 13c

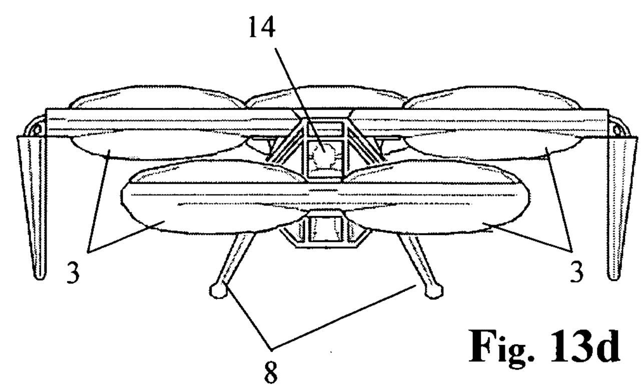

Fig. 13d

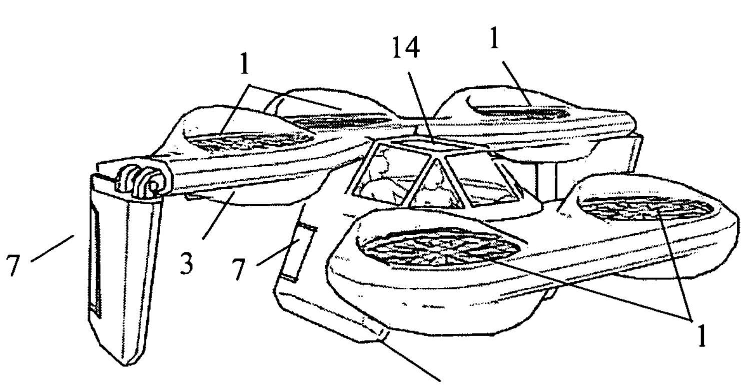

Fig. 13e

UFOz

aircraft with 6 shrouded impellerdisks

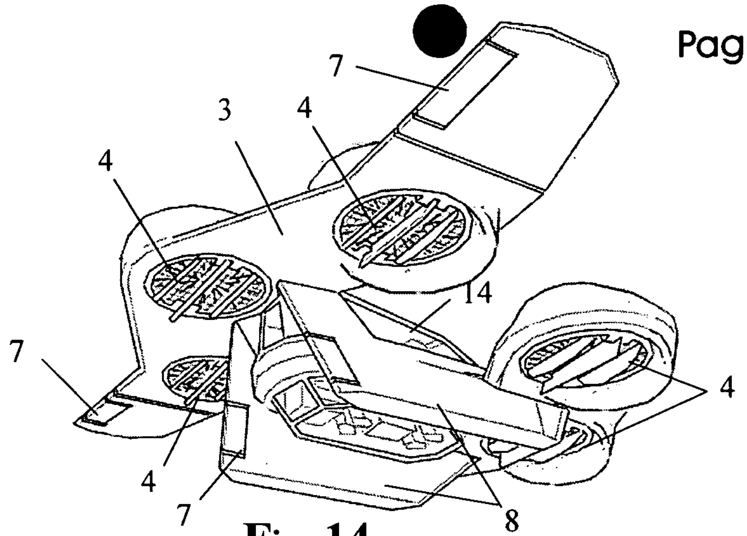

Fig. 14a

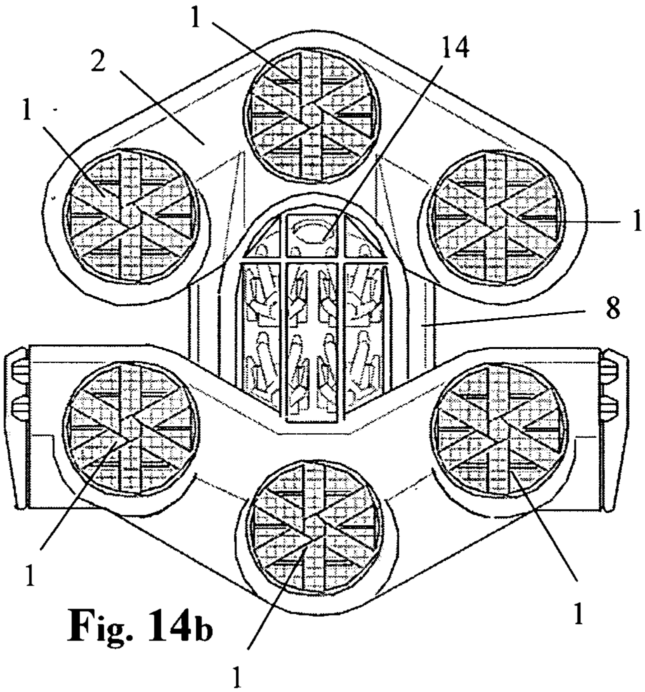

Fig. 14b

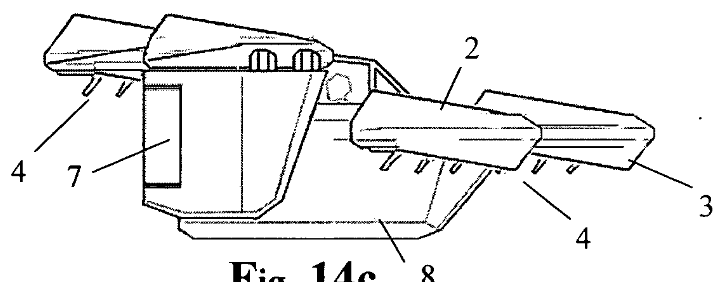

Fig. 14c

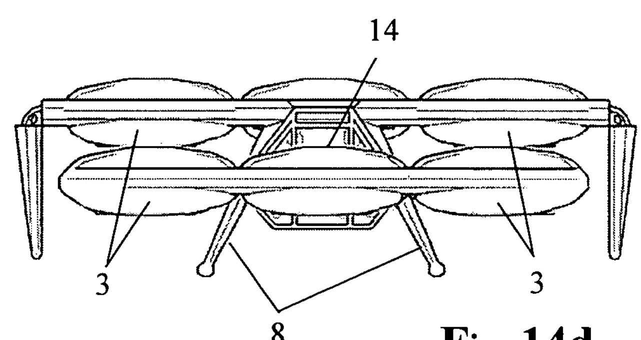

Fig. 14d

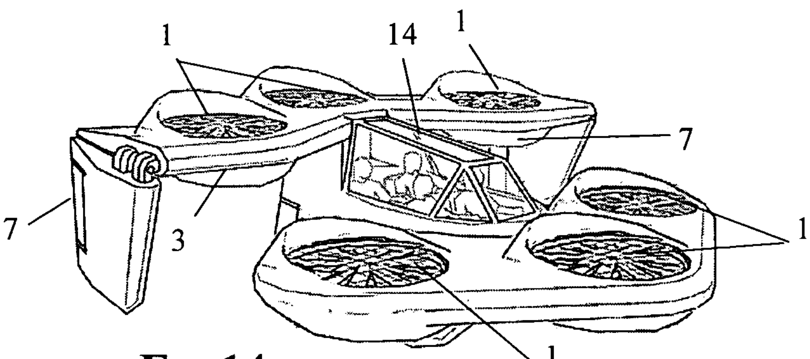

Fig. 14e

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Claims

What is claimed is:

1. A VTOL UFO comprising:

a fuselage having a partial toroidal body having a top, front, rear and bottom ends and a duct, or ducts, extending between the top and bottom surfaces, the fuselage having a longitudinal axis.

a propellerdisk and means, or a series of shrouded impellerdisks and means located in said duct, or ducts, for rotation about its axis, drive means to provide lift for said aircraft. the propellerdisk, or impellerdisks, having a plurality of fixed or variable pitch blades eminating from a central hub to an outer discoidal ring.

a series of three hollowed support struts eminating from an inner cone out to the inner wall of the toroidal body for supporting a cone shaped cargo area within the duct and house power and communication cables on embodiments having a single propellerdisk.

a vane system located in line with said duct below said propellerdisk, or impellerdisks, for controlling the direction of the developed air flow from said bottom openings.

at least a pair of fixed or rotating wings attached to said fuselage, at least a portion of the wings being pivotable with respect to the fuselage for flight control.

a landing gear; wheels, pontoons or rails attached to said fuselage.

2. A VTOL UFO of claim 1, comprising: an electric power drive, said drive means comprises: a series of permanant magnets in a bearing system to levitate said propellerdisk, or impellerdisks, at all times and a computer controlled linear induction magnetic bearing located in outter ring of said propellerdisk, or impellerdisks reacting to linear actuators located in said fuselage, used to rotate said propellerdisk, or impellerdisks and provide lift.

3. A VTOL UFO of claim 1 comprising: vents located at said rear end of embodiments using a single propellerdisk, with means for opening and closing to provide horizontal thrust for use in moving said aircraft in a forward direction.

4. A VTOL UFO according to claim 1 wherein the wings include a fixed or rotating portion, and wherein the pivotable portion is a flaperon which is hingedly attached to the aft of the fixed portion and is pivotable with respect to it.

5. A VTOL UFO according to claim 4 further comprising a servo actuator mounted within the fixed portion and engaged with the flaperon for controlling its actuation.

6. A VTOL UFO according to claim 1 further comprising at least one directional vane assembly mounted to and within the shroud downstream from the blades, the directional vane assembly having an outer ring and inner ring bearing being pivotable with respect to the shroud for providing directional control over the flow exiting the duct. At least one adjustable vane with means is connected to the rotatable inner ring for providing additional directional control over the flow exiting the duct.

Technical Field

The present invention relates to manned and unmanned aerial vehicles (UAVs). In particular to a vertical takeoff and landing (VTOL) unusual flying objects (UFOs) having a ducted propellerdisk or series of shrouded impellerdisks for providing zero and low speed horizontal and vertical thrust, and wings with vertical and horizontal stabilizers and air flow vane assembly for providing forward translational lift and thrust in high-speed flight.

Background Of The Invention

There are generally three types of VTOL configurations under current development, a wing type configuration (a fuselage with rotatable wings and engines or fixed wings with vectored thrust engines for vertical and horizontal translational flight), helicopter type configuration (a fuselage with a rotor mounted above which provides lift and thrust) and ducted type configuration (a fuselage with a ducted rotor system which provides translational flight, as well as vertical take-off and landing capabilities).

There is a long list of related inventions, but the most notable pioneers include the Focke-Wulf Fw 61 helicopter in 1936, Piasecki's G-1 tilt rotor in 1951 and Hiller who developed their first flying platform on the basis of a contract awarded in late 1953 by the Office of Naval Research (ONR) for a one-man flying platform. The machine made its first flight in February 1955, and was named the "VZ-1 Pawnee". The Piasecki Air Jeep, U.S. Pat. No. 2,282,612, developed and flown under the U.S. Army/Navy contracts between 1957

and 1962. In the 1960's Wendell Moore developed the wellknown Rocket Belt which can still be seen at various air shows to this day. The VZ-9-AV Avrocar, U.S. Pat. No. 3,062,482, was funded by both the US Army and US Air Force and was known for it's disk shape which looked very much like a scaled-up modern "Frisbee" toy. Dr. Moller has several designs, his most notable being his M200x, U.S. Pat. No. 3,410,507, for it's flying saucer disk shape and use of multiple engines. Which lead to his series of small ducted fan UAVs, known as Aerobots, U.S. Pat. No. 4,795,111, using a single fan or eight ducted fans, powered by rotary engines. The Airborne Remotely Operated Device (AROD) was a small ducted fan vertical-take-off-and-landing (VTOL) developed by Moller as a subcontractor to Perceptronics, was electrically powered, with power supplied through a tether from the ground station. Which has inspired Helicopter UAVs like the HoverCam can hover over a fixed spatial point and takeoff and land vertically but have limitations when operating in confined areas due to the exposed rotors rotating above the fuselage. And the Bell/Boeing Eagle Eye Tilt Rotor UAV, a scaled down versoin and derivative of the Bell/Boeing V-22 Osprey. In 1991 the HOVTOL UAV, U.S. Pat. No. 5,890,441, demonstrates twin high power engines capable of both vertical and horizontal flight using ducted fans primarily for vertical lift. And the Bombardier CL-327 Guardian VTOL UAV in 1996. It features dual, coaxial, contra-rotating, three bladed rotors. Its design is an evolution of the CL-227 Sentinel, and a follow-on concept, the CL-427 Puma has been proposed. In the late 1980s, Sikorsky Aircraft flew a small doughnut-shaped UAV named Cypher, U.S. Pat. No. 5,575,438, that was based on coaxial-rotor technology developed by the company in the early 1970s. The Cypher was clearly a flying platform in general concept. The doughnut-shaped shroud not only improved safety in handling the machine, it also helped increase lift. The Cypher II, U.S. Pat. No. 6,270,038, is of similar size to its predecessor, but has a pusher propeller along with its rotor and can be fitted to a configuration with wings for long-range reconnaissance missions.

Other than the electric motor tethered AROD, built by Dr. Moller, all past VTOLs, manned or unmanned, have delt with loud fuel burning engines as the means of propulsion and the weight issues that go with them. Which seperates all others from the current invention which uses new commercially available light weight quiet low voltage linear induction magnetic bearings simular to those used for monorails. To hover, the MAGLEV monorails requires less power than its air conditioning equipment. Most new rollercoasters use LIM/LSM: LIM (Linear Induction Motor) and LSM (Linear Synchronous Motor) the two variations of electro-magnetic propulsion. They replace a traditional lift hill and do not contain any moving parts. Typically LIM/LSM systems launch the roller coaster from the station extremely quickly. the fasest at 0-100 in 7 seconds. The high energy density and rugged design of these motors allows their use in demanding installations requiring high duty cycle, high power, rapid acceleration, improved speed and increased performance. Position sensing and control techniques allow for extremely precise control of acceleration and deceleration to permit the safe transport of sensitive or fragile loads. The lack of moving parts and wearing elements (no brushes or sliding contacts) in these motors greatly increases their reliability.

Description

Summary of Invention

The aircraft is made up of 4 primary parts, the top cap of the main body, the propellerdisk (or impellerdisks), the main body (fuselage) and the bottom vane assembly, all built out of a light weight durable composite material. The main cargo area is created by the top cap and the center cone of the main body.

The aircraft uses a magnetic levitation (maglev) bearing system to suspend the propellerdisk (or impellerdisks) between the top cap and the main body at all times. The magnetic bearing system is created by a series of permanent magnet rings, located on the top cap, the propellerdisk (or impellerdisk) and the main body.

A linear induction magnetic power drive is located in the outer edge of the propellerdisk (or impellerdisks), reacting to linear induction acuators located in the main body, which is used to rotate the propellerdisk (or impellerdisks).

Vertical lift in the aircraft is produced by the propellerdisk (or impellerdisks) driving a column of air downwardly, through an annular thrust-flow channel which is formed in the main body of the aircraft.

The annular thrust-flow channel is provided with a flow control vented mechanism at the bottom which is capable of directing the developed air flow in varying orientations between a substantially vertical (axial) orientation for developing stationary, vertical lift (i.e., hovering) and a vectored (angled) orientation for developing a vertical component for producing lift and a horizontal component for producing forward (or

rearward) flight.

The aircraft's main body also has an aerodynamic shape which is capable of developing lift responsive to forward flight using fins and rudders.

The power drive runs on light weight batteries, with a variety of optional rechargers, by linear generators, by paper thin solar panels on the body of the aircraft or an external battery charger. The battery industry, which is being driven by the electric transportation and portable consumer electronics industries, is making a substantial investment in battery technology. We will closely monitor the state of the art and will utilize the best available technology when the system design is finalized. Promising technologies include: nickel metal hydride, lithium-ion, and zinc-air.

Hybred variations will include liquid fuel booster jets in the propellerdisk (or impellerdisks) to gain increased power during vertical take off, which will increase flight endurance.

Unmanned surveillance aircraft will use a standardized teleoperation system (STS) & standardized robotic system (SRS) to control flight & manage audio/video information. Payload consists of the sensor suite, onboard controller, communications, and battery power pack. All communication between the platform and the control station passes through the mission payload.

The body shape and size of the aircraft is determined by the size and weight of the maglev power drive which is determined by the cargo (batteries, remote control servos, cpu and cameras).

Advantages of Invention

VTOL UFOs use linear induction magnetic bearings (LIMB) which are ideally suited for propulsion where as they provide superior value compared to other tradional types (ie. gasoline fueled engines and jet turbines). Value is a function of the following:

Lightweight- A LIMB power drive can weigh less than 1/20 of a conventional engine.

High Reliability- With magnetic bearings there is no contact between the rotating and stationary parts, meaning there is no wear. These components have design lives far greater than that of conventional bearings and engines. Magnetic bearings are providing high reliability and long service intervals in time critical applications in semiconductor manufacturing, vacuum pumps, and natural gas pipeline compression equipment.

Clean Power- In a magnetic bearing system, poluting exhuast, particle generation due to wear and the need for lubrication are eliminated. There is no gas, oil, grease or solid particles.

High Speed- The fact that a rotor spins in space without contact with the stator means drag on the rotor is minimal. That opens up the opportunity for the bearing to run at exceptionally high speeds, where the only limitation becomes the yield strength of the rotor material. Magnetic bearings have been designed with surface speeds up to 250 m/s or 4.5 million DN, where DN is the diameter of the rotor (mm) times the rotational spend (rpm). In order to achieve one quarter of this kind of speed with conventional bearings, a complex lubrication system is required. No other type of bearing, can match magnetic bearings for shear speed.

Position and Vibration Control- Magnetic bearings use advanced control algorithms to influence the motion of the shaft and therefore have the inherent capability to precisely control the position of the shaft within microns and to virtually eliminate vibrations.

Extreme Conditions- The magnetic bearing system, is capable of operating through an extremely wide temperature range. Some have applications as low as -256°c and as high as 220°c, thus allowing operation where traditional bearings will not function. Magnetic bearings can also operate in vacuum where their operation is even more efficient due to lack of windage.

Brief Description of Drawings

FIG. 1A is an exploded cut away perspective view of a single propellerdisk, an embodiment of a VTOL UFO according to the present invention. Fig. 1b is the compiled cut away perspective view of fig. 1a showing the top of the fuselage (2), the propellerdisk (1), the bottom of the fuselage (3), the vane assembly (4) and how they relate to each other.

FIG. 2A is an exploded cut away perspective view of a single impellerdisk, an embodiment of a VTOL UFO according to the present invention. Fig. 2b is the compiled cut away perspective view of fig. 2a showing the top of the fuselage (2), the impropellerdisk (1), the bottom of the fuselage (3), the vane assembly (4) and how they relate to each other.

FIG. 3A is an exploded cut away perspective view of a single

impellerdisk with liquid fuel jets, an embodiment of a VTOL UFO according to the present invention. Fig. 3b is the cross section view of fig. 3a showing the linear induction maglev bearing(16), battery asssembly (18a), variable pitch motors (18b), linear generators (18c) and how they relate to each other. Fig. 3c is the cross section view of fig. 3a showing the liquid fuel jets.

FIG. 4A is a lower rear perspective view of a single propellerdisk, an embodiment of an unmanned VTOL UFO according to the present invention. Fig. 4b is the top view of fig. 4a. Fig. 4c is the side view of fig. 4a. Fig. 4d is the front view of fig. 4a. Fig. 4e is an upper front perspective view of fig. 4a.

FIG. 5A is a side view of a single propellerdisk, an embodiment of a manned VTOL UFO according to the present invention, displaying the cockpit access ladder assembly (13). Fig. 5b is an upper rear perspective view of fig. 5a. and fig. 5c is an upper front perspective view of fig. 5a.

FIG 6A is a lower rear perspective view of a pair of vertically joined counter rotating impellerdisks, an embodiment of an unmanned VTOL UFO according to the present invention, displaying a hoverbot configuration. Fig. 6b is the top view of fig. 6a. Fig. 6c is the side view of fig. 6a. Fig. 6d is the front view of fig. 6a. Fig. 6e is an upper front perspective view of fig. 6a.

FIG 7A is a lower front perspective view of a pair of joined counter rotating impellerdisks, an embodiment of an unmanned VTOL UFO according to the present invention, displaying a hoverbot configuration. Fig. 7b is the top view of fig. 7a. Fig. 7c is the side view of fig. 7a. Fig. 7d is the front view of fig. 7a. Fig. 7e is an upper rear perspective view of fig. 7a.

FIG 8A is a lower front perspective view of a pair of joined counter rotating impellerdisks, an embodiment of a manned VTOL UFO according to the present invention, displaying a hoverboard configuration with a handlebar flight control assembly (21). Fig. 8b is the top view of fig. 8a. Fig. 8c is the side view of fig. 8a. Fig. 8d is the front view of fig. 8a. Fig. 8e is an upper rear perspective view of fig. 8a.

FIG 9A is a lower front perspective view of a pair of joined counter rotating impellerdisks, an embodiment of a manned VTOL UFO according to the present invention, displaying a hoverbike configuration with a handlebar flight control assembly(21). Fig. 9b is the top view of fig. 9a. Fig. 9c is the side view of fig. 9a. Fig. 9d is the front view of fig. 9a. Fig. 9e is a side perspective view of fig. 9a.

FIG 10A is a lower front perspective view of a pair of joined counter rotating impellerdisks, an embodiment of a manned VTOL UFO according to the present invention, displaying a hoverpod configuration with a cockpit (14). Fig. 10b is the top view of fig. 10a. Fig. 10c is the side view of fig. 10a. Fig. 10d is the front view of fig. 10a. Fig. 10e is an upper rear perspective view of fig. 10a.

FIG 11A is a lower rear perspective view of three joined impellerdisks, an embodiment of a manned VTOL UFO according to the present invention, displaying an aircraft configuration with a cockpit (14). Fig. 11b is the top view of fig. 11a. Fig. 11c is the side view of fig. 11a. Fig. 11d is the front view of fig. 11a. Fig. 11e is an upper front perspective view of fig. 11a.

FIG 12A is a lower rear perspective view of four joined counter rotating impropellerdisks, an embodiment of a manned VTOL UFO according to the present invention, displaying an aircraft configuration with a cockpit (14). Fig. 12b is the top view of fig. 12a. Fig. 12c is the side view of fig. 12a. Fig. 12d is the front view of fig. 12a. Fig. 12e is an upper front perspective view of fig. 12a.

FIG 13A is a lower rear perspective view of five joined impellerdisk, an embodiment of a manned VTOL UFO according to the present invention, displaying an aircraft configuration with a cockpit (14). Fig. 13b is the top view of fig. 13a. Fig. 13c is the side view of fig. 13a. Fig. 13d is the front view of fig. 13a. Fig. 13e is an upper front perspective view of fig. 13a.

FIG 14A is a lower rear perspective view of six joined impellerdisk, an embodiment of a manned VTOL UFO according to the present invention, displaying an aircraft configuration with a cockpit (14). Fig. 14b is the top view of fig. 14a. Fig. 14c is the side view of fig. 14a. Fig. 14dis the front view of fig. 14a. Fig. 14e is an upper front perspective view of fig. 14a.

Detailed Description Of The Preffered Embodiments

Referring now to the drawings wherein like reference characters identify corresponding or similar elements throughout the several views of the embodiments of the invention. Fig. 1

illustrates cut away perspective views, exploded and compiled, of one embodiment, using a single propellerdisk unmanned VTOL UFO according to the present invention. It includes a single propellerdisk (1), comprising of an outer discoidal ring (1a), a series of fixed propeller blades (1b), or a series of varitable pitch propeller blades (1c) attached to the outer ring eminating from an inner hub ring (1c). The outer discoidal ring (1a) houses a permanent magnet ring (15b) used to levitate the propellerdisk a fraction of an inch from a permanent magnet ring (15c) in the fuselage (3). The outer discoidal ring (1a) also houses the linear induction magnetic bearing (16) used to rotate the propellerdisk reacting to the linear induction actuator ring (17) in the fuselage (3). The outer discoidal ring (1a) also houses a ring of batteries or a custom battery ring (18a), varitable pitch motors (18b), and linear generators (18c) used to recharge the batteries. The outer discordal ring also houses optional liquid fuel ram jet assemblies made up of fuel tanks (6a), intake vents (6b), combustion nossles (6c), and exhaust vents (6d). The inner hub ring (1c) houses three permanent magnet rings (15b) used to levitate the propellerdisk a fraction of an inch from two permanent magnet rings (15a) in the top cap of the fuselage (2) and a permanent magnet ring (15c) in the fuselage (3). These permanent magnet rings (15a-c), which require no power, make up the bearing system needed to levitate the propellerdisk at all times including non-operation of the VTOL UFO. The top cap of the fuselage, in this unmanned single propellerdisk embodiment, is made up of a tinted plexiglass dome and a bottom ring that houses the two permanent magnet rings (15a). The top cap (2) attaches to the center cone (3b) of the main body of the fuselage (3) to create the permanent magnet bearing system. The area created within the top cap (2) and the center cone (3b) is the cargo area housing the central processing unit and battery assembly (9) and camera assembly (10). The central processing unit (9) controls all camera and flight control functions via a remote link (1e) to the linear induction magnetic bearing (16) and hard wire connections, eminating from the center cone (3b) through the hollowed struts (3a) connected to the inner wall of the outer toroidal fuselage (3), communicating with the linear induction actuator ring (17), the flight control stabilizer fins servos and batteries (7a), the rear vent servos and batteries (5), the bottom vane assembly servos and batteries (4b and 4e) and additional camera assemblies (11) all located in the toroidal fuselage (3). The bottom vane assembly's outer ring (4d) is attached to the fuselage at the bottom opening of the toroidal duct. A servo (4e) rotates the inner vane ring (4c) and a second servo (4b) rotates at least one vane (4a), (option, upto three vanes as shown in drawings) to redirect the developed air flow in any direction. Rear vent assemblies (5) are located at rear of the toroidal fuselage to aid in forward thrust when opened. The VTOL UFO also has at least two attached wings with pivotable portions (7), used for flight control, which are combined with the pivoting landing gear, pontoons or rails (8). An optional telerobotic arm (12) could be attached to the front of the fuselage for special missions.

A ladder assembly (13) is demonstrated in Fig. 4A-C for entering the cockpit (14) of a manned single propellerdisk embodiments of the invention.

Other embodiments of the VTOL UFO demontrate how multiple counter rotating propellerdisks can be joined by creating modular shrouded impellerdisks, in a variety of configurations combining them either vertically as shown in Fig 6a-e, or horizontally as shown in Fig. 7a-e. The center cone (3b of Fig. 1) is eliminated placing the cargo areas/payloads inbetween the horizontally joined impellerdisks. Instead of the top cap (2) and bottom fuselage (3) joining in the center hub, they now join around the outside crating a shrouded body around the impellerdisks (1), which now has a closed hub. Optional protective screens (20) can be added to the top and bottom openings of the toroidal duct.

Variations of multiple shrouded impellerdisks are demonstrated in Fig. 8a-e, Fig. 9a-e, Fig. 10a-e, Fig. 11a-e, Fig. 12a-e, Fig. 13a-e, and Fig. 14a-e. Some of which include foldable wing tips with pivotable portions (7) used for added flight control, joystick fly-by-wire flight controls (21), and or cockpits (14).

In addition to the VTOL UFO embodiments described and claimed above, in accordance with alternate embodiments of the invention, scaled up and/or down versions of any of the embodiments heretofore described may be employed for recreational or surveilance purposes, whether or not human subjects are conveyed thereupon or being used as remote controled UAVs. The described embodiments of the invention are intended to be merely exemplary and numerous variations and modifications will be apparent to those skilled in the art. All such variations and modifications are intended to be within the scope of the present invention as defined.